

Preface

Disposal of household and light industrial and commercial wastes is a necessity. Although there are several technologies available to handle these wastes, the most common means of disposal remains the municipal solid waste (MSW) landfill. With thousands of MSW landfills across the nation, it is not surprising that over the past 15 years, the Agency for Toxic Substances and Disease Registry (ATSDR) has received many requests for technical assistance and consultation about landfill issues. One of the most common requests is to evaluate the public health implications of landfill gas releases.

Landfill gas releases may represent physical (explosion), chemical (substances in ambient or indoor air), and/or physiologic or quality of life (odor) public health concerns for those who live and work near (or on) a landfill. This primer is intended to provide the environmental health professional, as well as the interested community member, with a basic understanding of landfill gases and how they should be viewed and evaluated from a public health perspective. It provides answers to questions that ATSDR has received from federal agencies, tribes, state and local health departments, and communities. Although the primer is thorough, the practical and applied guidance provided should be used to augment, and not replace, the multidisciplinary evaluation of public health issues related to landfill gas releases. Collaboration among the health and environmental entities and the community or tribe is necessary to address these issues. Such collaboration requires effective communication; the primer places special emphasis on communication as the key to successful implementation of any public health action or intervention.

Generally, well-maintained and operated MSW landfills will not be of public health concern or a nuisance to nearby neighbors. However, because much is left to be learned about the health effects that may result from exposures to low levels of ambient air contaminants and mixtures of these contaminants, environmental health professionals should exert care when assessing landfill gas issues. Several health studies are abstracted in this document to indicate the limited epidemiologic knowledge currently available to assist the environmental health professional in making public health decisions. The guidance and checklists are intended to prompt the health investigator to ask questions that shed light on the complexity of factors impacting the fate and transport of, and ultimately exposures to, landfill gases.

Our desire is for this primer to be a valuable resource for those who have questions and those who address questions about landfill gas releases. Your feedback to ATSDR will be helpful in defining what future guidance or revision is needed as we continue to address the myriad of public health questions that arise from the release of toxic and hazardous materials into the environment.

RADM Robert C. Williams, P.E., DEE
Assistant Surgeon General

